



A.D. 1855 N^o 2773.

S P E C I F I C A T I O N

OF

CHARLES FRANÇOIS JULES FONROBERT.
5

ARTIFICIAL LEECH AND SUCKER.

LONDON:

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A.D. 1855 N° 2773.

Artificial Leech and Sucker.

LETTERS PATENT to Charles François Jules Fonrobert, of Berlin, in the Kingdom of Prussia, for the Invention of “**AN ARTIFICIAL LEECH AND A SUCKER.**”

Sealed the 23rd May 1856, and dated the 8th December 1855.

PROVISIONAL SPECIFICATION left by the said Charles François Jules Fonrobert at the Office of the Commissioners of Patents, with his Petition, on the 8th December 1855.

I, CHARLES FRANCOIS JULES FONROBERT, do hereby declare the nature of
5 the said Invention for **AN ARTIFICIAL LEECH AND A SUCKER**, to be as follows :—

A cylindrical glass tube is attached to a curved end piece or elbow of ivory, metal, glass, caoutchouc, or other suitable material, in which is placed a small curved lancet, mounted on a pin or axis, which is capable of being easily removed when required. A piston is fitted into the cylindrical tube and

10 attached to a piston rod, which passes through a cap on the end of the tube, and carries a ring or handle by which it can be raised. A spring catch is formed on the side of the piston rod or attached to it, so that when the piston is raised by its handle it may be retained by the catch.

Below the piston is a stem or prolongation of the piston rod, with a small
15 button at its extremity, which comes in contact with a small projecting arm

Fonrobot's Artificial Leech and Sucker.

attached to or forming one piece with the lancet. The open end of the elbow piece is placed upon the flesh of the patient, and the piston is pushed down and then drawn up to the end of the cylindrical tube, where it is retained by the spring catch. The lancet is thus caused to make an incision in the flesh, and a partial vacuum is formed in the tube, into which the blood immediately 5 flows. In lieu of making the elbow piece separate from the cylindrical tube, it may be made in one piece with it. Thus, a tube of glass or other suitable material may be bent and contracted a little at the end, and a circular or cylindrical lancet may be attached to a small disc of ivory fitted into the tube, and connected to the piston by a helical spring of German silver or by other 10 suitable elastic material. The end of the tube is applied to the flesh as before, and the piston rod is turned round by its handle so as to cause the lancet to revolve and make the incision, and the piston is then drawn up and retained by the catch as before. The blood then flows into the tube. A straight tube may be employed in lieu of a bent tube, and the circular lancet 15 connected directly to the piston, and in this case the spring and ivory disc are not required. The mode of using the instrument remains the same. In some cases I employ a similar instrument without the lancet, for drawing the blood from an incision previously made. The materials of which the instruments are constructed may be varied. These instruments possess the 20 advantages of being simple in construction and in use, and easy to clean.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Charles François Jules Fonrobot in the Great Seal Patent Office on the 27th May 1856.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, CHARLES 25 FRANÇOIS JULES FONROBERT, of Berlin, in the Kingdom of Prussia, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eighth day of December, in the year of our Lord One thousand eight hundred and fifty-five, in the nineteenth year of Her reign, 30 did, for Herself, Her heirs and successors, give and grant unto me, the said Charles François Jules Fonrobot, Her special licence that I, the said Charles François Jules Fonrobot, my executors, administrators, and assigns, or such others as I, the said Charles François Jules Fonrobot, my execu- 35 tors, administrators, and assigns, should at any time agree with, and no others,

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from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for **AN ARTIFICIAL LEECH AND A SUCKER**, upon the condition
5 (amongst others) that I, the said Charles François Jules Fonrobert, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office
10 within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Charles François Jules Fonrobert, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and
15 by the following statement thereof, reference being had to the accompanying Drawing, and to the figures and letters marked thereon, that is to say:—

Figure 1 of the accompanying Drawing is a longitudinal section of an artificial leech constructed according to my Invention. A cylindrical glass tube A is attached to a curved end piece or elbow B of ivory, metal, glass,
20 caoutchouc, or other suitable material, in which is placed a small curved lancet C, mounted on a pin or axis, which is capable of being easily removed when required. A plan and side view of the lancet are shewn in Figure 2. Figure 3 is a separate view of the pin D on which the lancet turns; Figure 4 is a front view of the elbow or piece B, with the lancet C and pin D. A
25 piston E of cork or other suitable material is fitted into the cylindrical tube A, and attached to a piston rod F, which passes through a cap G on the end of the tube, and carries a ring or handle H by which it can be raised. A spring catch I is formed in the side of the piston rod or attached to it, so that when the piston is raised by its handle it may be retained by the catch I,
30 which springs out after passing through the cap G, and rests or catches upon it. When it is required to push the piston down again, the catch I is pressed in by the finger and thumb, and it then passes through the hole in the cap. Below the piston is a stem or prolongation of the piston rod J, with a small button or knob at its extremity, which comes in contact with a small pro-
35 jecting arm attached to or forming one piece with the lancet, as shewn in the Drawing. Figure 5 is a detached view of the piston and piston rod.

The open end of the elbow piece B is placed upon the flesh of the patient, and the piston is pushed towards the elbow, and then drawn back to the end of the cylindrical tube A, where it is retained by the spring catch I. The

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lancet is thus caused to make an incision in the flesh, and a partial vacuum is formed in the tube, into which the blood immediately flows. The artificial leech is kept in its place by the pressure of the atmosphere, and it may be left until a sufficient quantity of blood has been drawn, or until it is nearly full of blood, when it will release its hold of the flesh and drop off. Several of these 5 leeches may be applied at the same time if required.

In lieu of making the elbow piece separate from the cylindrical tube, it may be made in one piece with it. Figure 6 is a section of such a form of tube, with a somewhat different arrangement of lancet. A is the glass tube, which is contracted a little at the end and bent to form the elbow B. E is the 10 piston; and F is the piston rod, passing through the cap G and terminating in a knob H; I is the spring catch, as before; C is the lancet, which is made in the form of a small thimble with a sharp edge, as shewn in the detached views, Figure 7. The lancet is connected to the piston by a helical spring J, of German silver or other suitable material; D is a disc of ivory, which fits 15 loosely in the narrow part of the tube, and serves to guide the lancet and keep it in the centre of the tube. Figure 8 is a detached view of a portion of the piston rod, with a section of the piston E.

The narrow end of the tube is placed upon the flesh of the patient as before, and the piston rod is turned round by the knob H, so as to cause the 20 lancet to revolve and make the incision. The piston is then drawn to the end of the tube and retained by the catch, and the blood then flows into the tube, as before. A straight tube may be employed in lieu of a bent tube, and the circular lancet may then be connected directly to the piston, and in this case the spring J and disc D are not required. The mode of using 25 the instrument remains the same.

In some cases, as, for instance, when a considerable quantity of blood is to be drawn from the patient, in lieu of employing several artificial leeches, I make a number of incisions with an artificial leech, and I apply to each incision one of the suckers, shewn in section in Figure 9. This sucker is 30 constructed in a similar manner to the leech, but without the lancet. A is the tube bent to form an elbow at B; E is the piston; and F is the piston rod, passing through the cap G, and furnished with a ring or handle H; I is the spring catch, as before. The open end is applied to the incision in the flesh, and the piston is drawn to the end of the tube and retained there by the 35 catch I. The blood then flows in as before.

Having now described the nature of the Invention, and in what manner the same is to be performed, I wish it to be understood that what I claim is,—

Firstly, the constructing an artificial leech, with a cylinder and piston and

Fonrobert's Artificial Leech and Sucker.

a lancet, so arranged that motion may be communicated to the lancet by means of the piston and rod, as herein-before described.

Secondly, the constructing an artificial leech with a circular or revolving lancet connected to the piston by a spring or otherwise, as herein-before 5 described.

Thirdly, the constructing an artificial leech and a sucker, with a catch for securing the piston, constructed and arranged in manner herein-before described.

Fourthly, the constructing a sucker of a bent tube, with a piston and rod 10 provided with a catch, as herein-before described in reference to Figure 9.

In witness whereof, I, the said Charles François Jules Fonrobert, have hereunto set my hand and seal, this Twenty-fourth day of May, in the year of our Lord One thousand eight hundred and fifty-six.

CHARLES FRANÇOIS JULES FONROBERT. (L.S.)

LONDON :

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Printers to the Queen's most Excellent Majesty. 1856.

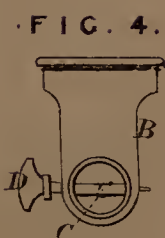
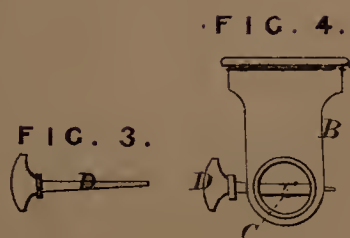
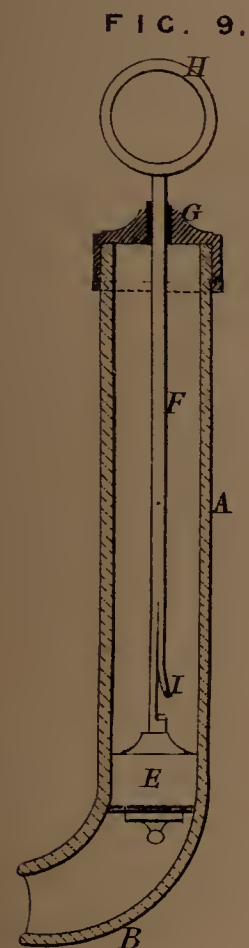


FIG. 5.

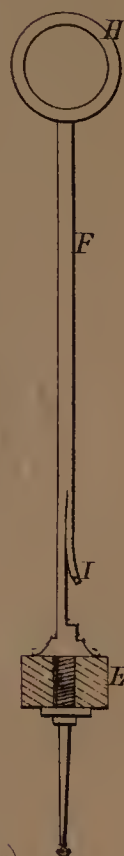


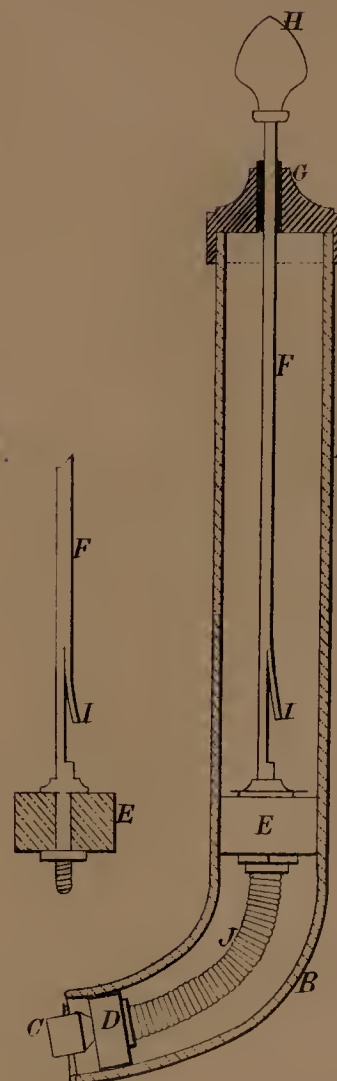
FIG. 1.



FIG. 8.



FIG. 6.



The filed drawing is partly colored.

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